

Appl. Serial No. 09/802,067
Amdt. dated October 14, 2003
Response to Office Action mailed July 9, 2003

REMARKS:

In making the amendments shown above, care has been taken to ensure that the claims remain supported by the specification and that no new matter has been introduced. In the Amendments, pending claims 8 and 10-13 have been cancelled. New Claims 14-16 have been added. The title has been amended to better reflect the invention as claimed. The specification and drawings have been amended to make corrections and to address the examiner's objections.

I. DRAWING AND SPECIFICATION OBJECTIONS

Applicants respectfully submit that the amendments herein address the examiner's objections. In Fig. 13, Q has been corrected to Θ , and the specification has been corrected to change 7 to 7A or 7B as appropriate. Reference signs 20A and 20B have been corrected in the specification as appropriate. Appropriate references to Figs. 8 and 9, and typographical errors, have been changed in the specification to support reference signs 20A and 20B in the drawings. In Fig. 10(c), "Z1" has been corrected to "Z1'". Appropriate identification of sign 10, designating an extension line, has been added to the specification. Appropriate references to Figs. 1, 3, and 8 have been added to the specification to support reference signs 55-57 in the drawings. Misspelling of "laser beam" has been corrected.

The reference signs and parts listed below were the subject of some apparent typographical errors in the specification, which have been corrected in this amendment. The correct parts and their corresponding signs follow:

Radio receiver 20A

Arithmetic means 20B

Second GPS unit 76

Radio communication unit 79

Radio communication unit 82 (a second one)

Data collector 84

Radio receiver 85

If the drawing amendments are approved, Applicants will submit formal drawings incorporating the proposed drawing amendments at the time of allowance.

II. REJECTION OF CLAIMS UNDER §112

Applicants submit that the new claims address the antecedent basis issues presented by the Examiner.

IV. REJECTION OF CLAIMS UNDER 35 U.S.C. § 103(A)

Applicants appreciate the time and consideration provided by Examiner in reviewing this application, but respectfully traverse the rejection under 35 U.S.C. § 103(a), and submit that the claims as presented herein are not obvious over the cited references, for at least the reasons set forth below.

The present invention differs from the cited reference Ericsson *et al.* (U.S. Patent 6,175,328) in that the invention disclosed in Ericsson *et al.* relates to a ranging device as well as an angle measurement device for detecting a distance and an angle of a reference position, while the present invention relates to a reference laser beam radiator for radiating a reference laser beam to indicate a reference direction linearly between a space of the reference laser beam radiator and a first position for setting an article such as a pipe, so that the article can be laid straight, without tacking or crookedness, by coinciding the article with the radiated reference laser beam. Therefore, the present invention differs from the invention disclosed in Ericsson *et al.* in object, structure and effect.

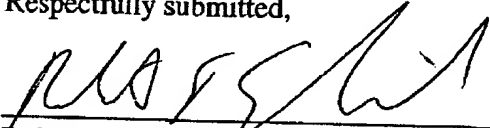
Although a laser beam radiator radiating a reference laser beam toward a target is disclosed in the references, the laser beam radiator disclosed in the references has to be used with a theodolite in order to place the target and achieve its object, which is to radiate the reference laser beam in a certain direction. In contrast, the present invention accomplishes accurate radiation of the reference laser beam to a certain direction without utilizing the theodolite. Use

of the theodolite poses problems, in that it causes large measurement error, and requires considerable skill on the part of the worker, even when operated by a quite skilled worker. Use of the theodolite also is time consuming. Because the present invention is not dependent on the theodolite, great improvement in construction work can be accomplished by the present invention, in terms of fast and easy setting work for radiating the reference laser beam, and less necessity for skilled workers. Even unskilled workers can carry out the setting work using the present invention, which helps illustrate its distinction from and improvement over the references.

Accordingly, the present invention is different from Ericsson et al and the other references, and even if the cited references are combined, the object and the result that can be attained by the present invention would not be achieved. The applicants respectfully submit that the claims as presented are new and not obvious, and that the rejections of the Office Action have been met. Based on the foregoing, Applicants respectfully request withdrawal of the rejection under 35 U.S.C. §103(a).

Conclusion. Applicants respectfully submit that the claims as presented define the invention in clear and concise patentable terms, and that the objections and rejections of the Office Action have been met. Applicants request favorable treatment of this application at an early date. The Commissioner is hereby authorized to charge any fees associated with this communication, including any outstanding extension fees, to our Deposit Account No. 50-0305. The Examiner is encouraged to call Robert J. Schneider at the direct number (312) 845-3919 with any questions that arise in connection with this application.

Respectfully submitted,


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Date of Facsimile Transmission: October 14, 2003
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I hereby certify that the attached correspondence, namely, Response to Office Action, was transmitted by facsimile on the date listed above, to the U.S. Patent Office at the facsimile number listed above, under 37 C.F.R. § 1.8.

Signature:



Typed Name of Person Signing this Certificate: Brenda A. Walton

Date of Signature: October 14, 2003

OFFICIAL

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APPENDIX

Attached: Two Replacement Drawing Sheets
Two Annotated Drawing Sheets Showing Changes